



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/732,049	12/07/2000	Shunpei Yamazaki	SEL 232	9973

7590 05/24/2004
COOK, ALEX, McFARRON, MANZO
CUMMINGS & MEHLER, LTD.
SUITE 2850
200 WEST ADAMS STREET
CHICAGO, IL 60606

EXAMINER

KEANEY, ELIZABETH MARIE

ART UNIT PAPER NUMBER

2882

DATE MAILED: 05/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/732,049

Applicant(s)

YAMAZAKI ET AL.

Examiner

Elizabeth Keaney

Art Unit

2882

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 December 2003 and 23 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on 07 December 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Receipt is acknowledged of the Request for Continued Examination filed 23 February 2004 and Amendments filed 22 December 2003.

Specification

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: the limitations of "a current supply line provided over a first substrate and connected with the luminous element via the current control TFT", "the wiring for aiding said current supply line is an alloy film containing as a main component a material selected from the group consisting of copper, silver, gold, aluminum and nickel" and "said wiring for aiding said current supply line is formed into a layered structure made of a metallic film that is made of two or more different elements selected from copper, silver, gold, aluminum and nickel" must be supported by the specification.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States

only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3,5-9,11 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Yamada et al. (US Patent 5,990,629; hereinafter Yamada).

Re claim 1: Yamada discloses, in figure 4 and throughout the disclosure, a light-emitting device, comprising:

- a first substrate (14);
- a luminous element (11b) provided over the first substrate (14);
- a current control TFT (12) provided over the first substrate (14);
- a current supply line (12c) provided over the first substrate (14) and connected with the luminous element (11b) via the current control TFT (12);
- a second substrate (14c);
- a wiring for aiding the current supply like (11a), the wiring for aiding the current supply line provided over the second substrate (14c) and electrically connected to the current supply line (12c); and
- a conductor for electrically connecting the current supply line and the wiring for aiding the current supply line (column 7, lines 65-67).

Re claim 7: Yamada discloses, in figure 4 and throughout the disclosure, a light-emitting device, comprising:

- a first substrate (14);

- a luminous element (11b) provided over the first substrate (14);
- a current control TFT (12) provided over the first substrate (14);
- a gate control wiring (12c) provided over the first substrate (14);
- a second substrate (14c);
- a gate control auxiliary line (11a) provided over the second substrate (14c) and electrically connected to the gate control wiring (12c);
- a conductor for electrically connecting the gate control wiring and the gate control auxiliary line (column 7, lines 65-67); and
- a sealing agent (14b) for bonding the first substrate (14) and the second substrate (14c) together.

Re claims 2 and 8: Yamada discloses, in figure 4 and throughout the disclosure, the luminous element being an EL element (11).

Re claims 3 and 9: Yamada discloses the wiring for aiding the current supply line/gate control auxiliary line being made of a metallic film selected from the group consisting of copper, silver, gold, aluminum and nickel (column 7, line 63).

Re claims 5 and 11: Yamada discloses, in figure 4 and throughout the disclosure, the wiring for aiding the current supply line/gate control auxiliary line (11a) being formed on the front surface of the second substrate.

Re claims 6 and 12: Yamada discloses, in figure 4 and throughout the disclosure, a via hole (15a) that is covered by the wiring for aiding the current supply line/gate control auxiliary line (11a) being formed in the second substrate (14c).

Claims 13,14,15,17 and 18 are rejected under 35 U.S.C. 102(e) as being anticipated by Ohtani et al. (US Patent 6,225,966; hereinafter Ohtani).

Re claim 13: Ohtani discloses, in figure 6 and throughout the disclosure, a light-emitting device, comprising:

- a first substrate (100);
 - a luminous element provided over the first substrate (column 5, line 30);
 - a current control TFT (202) provided over the first substrate (100);
 - a current supply line (303) provided over the first substrate (100) and connected with the luminous element via the current control TFT (202);
 - a second substrate (601);
 - a wiring for aiding the current supply line (602), the wiring for aiding the current supply line provided over the second substrate (601) and electrically connected to the current supply line (303);
 - a conductor for electrically connecting the current supply line and the wiring for aiding the current supply line (603);
 - a sealing agent (501) for bonding the first and second substrate together;
- and

- a resin (501) filled in a space between the first and second substrate.

The Examiner notes that since resin has bonding characteristics, the sealing agent and the resin have been interpreted as one element.

Re claim 14: Ohtani discloses the luminous element being an EL element (column 10, line 23).

Re claim 15: Ohtani discloses the wiring for aiding the current supply line being made of a metallic film selected from the group consisting of copper, silver, gold, aluminum and nickel (column 8, line 40).

Re claim 17: Ohtani discloses, in figure 6 and throughout the disclosure, the wiring for aiding the current supply line (602) being formed on the front surface of the second substrate.

Re claim 18: Ohtani discloses a via hole that is covered by the wiring for aiding the current supply line being formed in the second substrate (column 8, line 49).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamada as applied to claims 1 and 7 above, and further in view of Masutani et al. (US Patent 5,838,037; hereinafter Masutani).

Yamada shows all the limitations above, including a wiring for aiding the current supply.

However, Yamada fails to teach or fairly suggest the wiring for aiding the current supply being formed into a layered structure made of a metallic film that is made of two or more different elements selected from copper, silver, gold, aluminum and nickel.

Masutani discloses wires being formed into a layered structure made of a metallic film that is made of two or more different elements selected from copper, silver, gold, aluminum and nickel (column 7, line 55).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute a layered structure wire for that of a single layer metallic film as taught by Yamada because in using a layered structure the electric resistance of the wiring is lowered and the rate at which the current is supplied to the device is improved thereby lowering the power consumption of the device.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ohtani as applied to claim 13 above, and further in view of Masutani.

Ohtani shows all the limitations above, including a wiring for aiding the current supply.

However, Ohtani fails to teach or fairly suggest the wiring for aiding the current supply being formed into a layered structure made of a metallic film that is made of two or more different elements selected from copper, silver, gold, aluminum and nickel.

Masutani discloses wires being formed into a layered structure made of a metallic film that is made of two or more different elements selected from copper, silver, gold, aluminum and nickel (column 7, line 55).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute a layered structure wire for that of a single layer metallic film as taught by Yamada because in using a layered structure the electric resistance of the wiring is lowered and the rate at which the current is supplied to the device is improved thereby lowering the power consumption of the device.

Conclusion

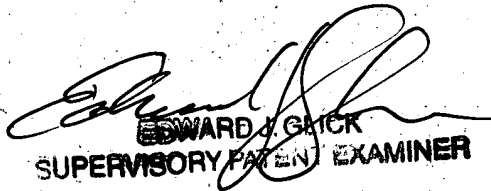
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth Keaney whose telephone number is (571)272-2489. The examiner can normally be reached on Monday-Thursday 5:30-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Glick can be reached on (571)272-2490. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2882

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

EMK
emk


EDWARD J. GLICK
SUPERVISORY PATENT EXAMINER